# COMPOST BINS

## SOURCES & DESIGNS

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**BUILD OR BUY YOUR OWN COMPOST BIN—THERE'S ONE FOR EVERY OCCASION.**

SAN FRANCISCO
**HOME COMPOSTING**
PROGRAM

San Francisco
League of
Urban
Gardeners

**San Francisco**
**RECYCLING**
PROGRAM

## RESOURCES

### MORE COMPOSTING BROCHURES

- *Basic Composting*
- *Composting Fruit & Vegetable Trimmings*

### COMPOST EDUCATION CENTER

Stop by the center in SLUG's Garden for the Environment at 7th Ave. and Lawton! It features compost bins and how-to signs. Open all daylight hours.

### FREE WORKSHOPS

Sign up for our basic and worm composting workshops! Call the Rotline for a current schedule.

### BOOKS

*Backyard Composting*, 1992. Harmonious Technologies, Harmonious Press, Ojai, CA, 96 pp.

*Let It Rot!*, 1975. Stu Campbell, Garden Way Publishing, Pownal, VT, 144 pp.

*Rodale Book of Composting*, 1992. G. Gershuny, Saint Martin's Press, New York, NY, 278 pp.

*Worms Eat My Garbage*, 1982. Mary Appelhof, Flower Press, Kalamazoo, MI, 100 pp.

**THE ROTLINE (415) 285-7585**

The Rotline anwsers compost questions.

**RECYCLING HOTLINE (415) 554-6193**

### ABOUT THE S.F. RECYCLING PROGRAM

The San Francisco Recycling Program, operated by the City and County, offers services in curbside and apartment recycling, commercial recycling, school education, organics recovery, reuse, waste reduction and market development for recyclables.

### ABOUT SLUG

SLUG greens the City, brings neighbors together in community gardens, provides employment and training to low-income communities, and teaches home composting and gardening. Join SLUG to support these efforts and receive free seeds, supplies, and discounts at local nurseries.

San Francisco League of Urban Gardeners
2088 Oakdale Avenue, San Francisco,
CA 94124 • (415) 285-SLUG

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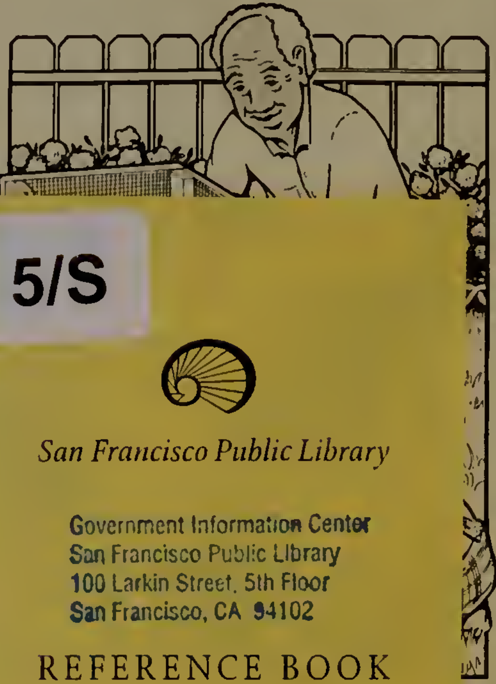

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## CHOOSING A BIN

To help you choose the bin that best fits your lifestyle, each "do-it-yourself" bin in this brochure is described with a thumbnail sketch and building instructions. Commercial bins are listed with 1993 prices, descriptions, and sources. For information on Bargain Compost Bins for San Francisco residents, call the Rotline: 285-7585.

## RODENT-RESISTANCE

Whenever you compost fruit & vegetable trimmings, the Health Department requires a rodent-resistant system. A rodent-resistant bin has a lid, floor, and no holes larger than 1/4 inch. The most rodent-resistant bins are enclosed in 1/4 inch wire mesh. For information on how to compost fruit & vegetable trimmings (in or out of bins), see the *Basic Composting* and *Composting Fruit & Vegetable Trimmings* brochures.

## CONSTRUCTION TIPS

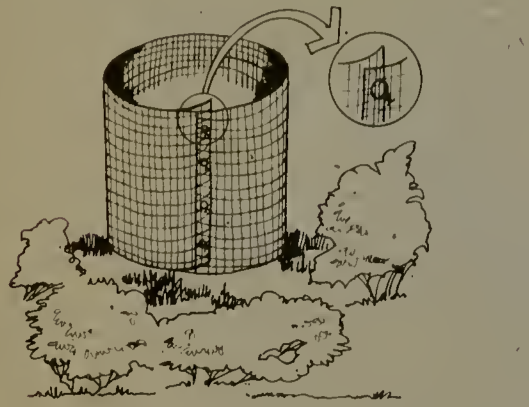
- Read entire directions before starting project.
- Always measure twice, and cut once.
- Sawblade cuts are about 1/8" wide and need to be included in all measurements.
- Using salvaged lumber saves money and natural resources (see *Building Materials* section).
- Salvaged lumber may not have the same thicknesses as new lumber, and may require adjusting measurements.
- Redwood is expensive, but can last 10 years or more.
- Fir is less expensive, but may only last 3–8 years.
- All wood lasts longer if treated annually (see "Non-Toxic Wood/Preservatives" in the *Building Materials* section).
- Experiment to create the best bin for you.
- Wear eye protection, and **BE CAREFUL!**

## E-Z WIRE HOOP

- For yard trimmings *only* (unless hoop is made rodent-resistant)
- Requires min. 3'x3' yard space
- For "Active" composting—chopping & turning required (see *Basic Composting* brochure)
- Produces small to large amounts of compost
- Very easy to build
- $15 – $30 for new materials

### MATERIALS

♦ 10'x3' piece of heavy-duty wire mesh fencing or hardware cloth (1/4", 1/2", 1", or 2" mesh)
♦ (4) 5" pieces of 14 gauge insulated wire or other easy-to-twist wire larger than 12 gauge

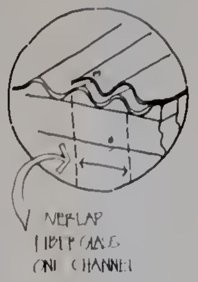


### ASSEMBLY & INSTALLATION

1. Form hardware cloth into a hoop, overlapping the ends 3 or 4 inches.
2. Attach ends of hardware cloth with 5" pieces of wire (see drawing).
3. For best results, install in a location that is protected from the wind, and where there is enough space to turn the compost easily (about 3'x6'). Compost can be turned by unfastening the hoop, setting it up in an adjacent spot, then forking the compost into the hoop in its new location.

# 3-BIN COMPOSTER

- For yard trimmings (and fruit & vegetable trimmings if well maintained)
- Requires min. 3'x9' of yard space
- For "No-Fuss" or "Mixed" compost (see *Basic Composting* brochure)
- Excellent for hot composting—has removable front slats for easy turning, and separate bins for turning and aging compost, and/or storing compostables
- Can handle large amounts of compostables
- Carpentry skills needed for construction
- $175 – $200 for new materials



## MATERIALS

- ♦ 2x4" wood*: (8) 31-1/2", (8) 36", (4) 9', and (4) 29" pieces
- ♦ 2x6" wood: (4) 36" pieces
- ♦ 2x2" wood: (6) 34-1/2", (1) 9', and (4) 29" pieces
- ♦ 1x6" wood: (19) 31" pieces
- ♦ 1/4" mesh hardware cloth: 30'x3'
- ♦ Carriage bolts (3-1/2"x3/8"): 12, with washers & nuts
- ♦ 12 penny galvanized nails: 2 lbs.
- ♦ 8 penny galvanized nails: 1 lb.
- ♦ Poultry wire staples: 1 lb.
- ♦ Corrugated fiberglass (4 oz.): (2) 8'x26" pieces
- ♦ Gasketed roofing nails: (40)
- ♦ Wiggle molding: 18 feet
- ♦ 3" hinges (zinc-plated, galvanized or brass): (3)
- ♦ 4" flat corner braces: (4), with 1" wood screws
- ♦ 4" flat "T" braces: (4), with 1" wood screws
- ♦ (4) hook eyes, and 8' of strong twine or chain

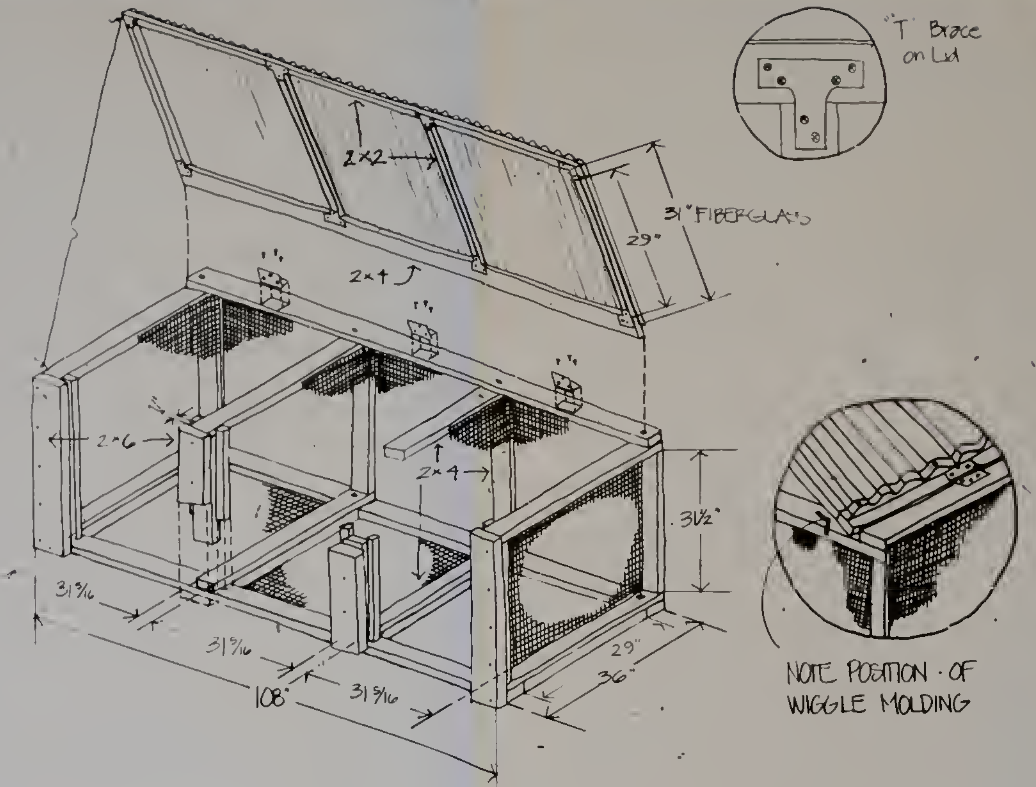
*Bin dimensions based on planed wood.

## TOOLS

Power saw (use eye protection) or hand saw, drill with 3/8" and 1/16" bits, screwdriver, hammer, tin snips, tape measure, pencil, socket or wrench, carpenter's square

## TWO-BIN ADAPTATION

You can make a two-bin composter for a smaller yard by carefully adapting the materials list, drawings, and assembly instructions.



Based on design by Seattle Tilth

## ASSEMBLY

**Main structure:** Butt-nail two 31-1/2" and two 36" 2x4s together with 12-penny nails to form each of four screen dividers. Cut four 36x33-1/2" wire mesh pieces, and staple (every 4") to frames after checking frames for squareness. Bolt dividers to three 9' 2x4s as shown (inside measurement between dividers should be 31-5/16"). Tack in 29" 2x4s as shown. Staple one 9'x3' piece of wire mesh (every 4") to back of structure, and one 9'x3' piece to the bottom.

**Slats and slat tracks:** Nail 2x6s to front of dividers. Nail 34-1/2" 2x2"s onto frames as shown. Leave at least 1" for the slats to slide in. The last slat of each bin section needs to be cut lengthwise to fit.

**Lid:** Assemble lid frame as shown, with flat corner and "T" braces on the bottom side. Pre-drill nail holes every couple of feet into wiggle-molding humps, and attach molding to 9' 2x2 and 9' 2x4 with 8-penny nails. Note position of wiggle molding on 2x4 in drawing. Cut fiberglass into five 32" pieces with tin snips. Pre-drill fiberglass and wiggle molding on top of every third hump, and nail together with gasketed nails. Be sure to overlay fiberglass pieces at least one channel wide, and before attaching the last piece, trim off excess fiberglass. Attach lid to frame with hinges. Attach heavy-duty twine or chain to lid and main frame with hook-eyes as shown (to prevent lid from falling all the way back).

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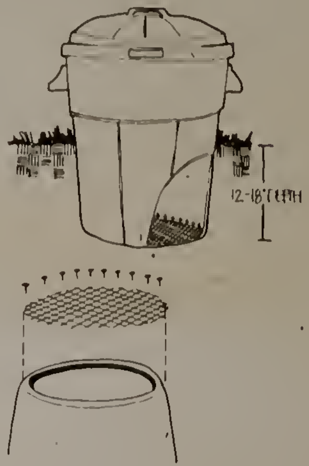
# CLOSED-AIR "GARBAGE-CAN" COMPOSTER

- For fruit & vegetable trimmings only
- Requires 3'x3' yard space for each bin; 2 bins best
- Low maintenance—for "Closed-Air" composting (see *Composting Fruit & Vegetable Trimmings* brochure)
- Prone to odor and insect problems
- Produces small amounts of compost infrequently
- Minimal construction skills needed
- $12 – $35 for new materials

## MATERIALS

- ♦ (1) plastic garbage can, 32-gallon or larger
- ♦ (1) piece 1/4" wire mesh hardware cloth to cover bottom of can (about 2'x2')
- ♦ (16–20) 1/2" galvanized, Phillips-head wood screws



## TOOLS

Power drill-driver (or a Phillips screwdriver, hammer and a medium-sized nail), tin snips, utility knife

## ASSEMBLY & INSTALLATION

**1.** With a utility knife, cut a hole out of the bottom of the can, leaving just a 1" edge for attaching the screen.
**2.** With tin snips, cut hardware cloth the same size and shape as the bottom of the can.
**3.** Attach hardware cloth to the outside of the bottom of the can with the 16-20 screws spaced about 4" apart. If you are using a hand screwdriver, poke holes for the screws with the hammer and nail. With a power drill-driver, no pre-drilling is necessary. When finished, be sure the screen fits tightly against the can so there are no openings larger than 1/4".
**4.** Install bin (or bins) by digging a hole and burying the bottom 12"-18". Be sure to pack the soil firmly around the edges.

## BUILDING MATERIALS

### SALVAGED LUMBER

**Caldwell Building Supplies** 195 Bayshore Blvd., in San Francisco; 550-6777. **Urban Ore**, 7th & Gilman, in Berkeley; (510) 526-7080. **Construction sites** often have lots of scrap lumber for free. Ask for permission, watch for nails, and be careful!

### NON-TOXIC WOOD/PRESERVATIVES

To preserve untreated wood, seal annually with linseed oil or shellac (available widely), or "Penetrating Water Seal" (from **Earthsake**, 1805 4th St., in Berkeley, (510) 848-0484). Pressure-treated wood leaches toxins into compost and soil—if used at all, be sure to paint it.

### WIRE-MESH FENCING & HARDWARE CLOTH

Most hardware stores and lumber yards carry wire mesh hardware cloth or other sturdy fencing material.

### PLASTIC BINS FOR WORMS (RETAIL)

Most hardware, office supply and discount supply stores carry an assortment of plastic storage containers. Look for ones with tight-fitting lids.

### SALVAGED WOODEN SHIPPING CRATES FOR WORMS

**Marshall Fine Art**, 1062 Revere Ave. in S.F., call (415) 467-3628 for availability.

### PLASTIC GARBAGE CANS & SALVAGED DRUMS

Reuse an old 32-gallon or larger garbage can or pick one up at a hardware store—the more heavy-duty, the better. For salvaged plastic drums: **Containers Unlimited**, 10901 Russet St., Bldg. #3 at 105th Ave., in Oakland, (510) 430-0503. **Hoyt Containers**, 821–98th Ave., in Oakland, (510) 625-0201.

## COMMERCIAL BIN SOURCES

| BIN | RODENT-RESISTANT? | DESCRIPTION | RETAIL PRICE* | SOURCES |
|---|---|---|---|---|
| Avant Gardener Vermicompost System | yes | Plastic worm bin | $69.50 | Avant Garden P.O. Box 1303 Ross CA 94957, (415) 488-1642; Natural Gardening Co. 217 San Anselmo Av. San Anselmo CA 94960, (415) 456-5060 |
| Biostack | no | Plastic, cubical, 3 stackable tiers | $99 | Smith & Hawken 35 Corte Madera Av. Mill Valley CA 94941, (800) 776-3336 |
| City Worm Box | yes | Wooden worm bin, 1,2&4-person | $45-110 | City Worms & Compost 1850 32nd Av. S.F. CA 94122, (415) 759-6907 |
| City Gardener | yes | Plastic closed-air system | $49 | We Recycle Corp. 19-342 Bronte St. S. Milton Ontario L9T5B7 Canada , (416) 875-2588 |
| E-Z Compost Bin | no | Plastic coated wire cage | $39.95 | Natural Gardening Co. 217 San Anselmo Av. San Anselmo CA 94960, (415) 456-5060 |
| Earth Machine** | yes/no | Cylindrical, plastic, w/ harvest door w/ or w/o floor | $99, or . . . (w/ floor) | ***San Francisco's '93-94 Bargain Compost Bin, just $32.50 to S.F. residents! Call the Rotline (285-7585) for current availability.*** Norseman Plastics 2296 Kenmore Ave. Buffalo NY 14207, (800) 267-4391 |
| Green Genie (Bonar) | yes | Cylindrical, plastic, w/ harvest door | $86 | Belcan Ind. Inc. P.O. Box 144 Port Coquitlam B.C. V3C3V5, (605) 942-0279 |
| Groundskeeper | no | Biodegradable paperboard hoop | $5.57 | Delvin & Taylor Co. 8035 Thornapple Rd. Novelty OH 44072, (800) 331-8080 |
| Kemp Compostumbler | yes | Steel rotating drum, sm. & lrg. | $319-369 | Kemp Co. 160 Koser Road Lititz PA 17543, (800) 441-5367 |
| Natursoil | no | Cedar slats w/ 4 corner rods | $59.69 | Reach Inc. P.O. Box 1748 Klamath Falls OR 97601, (503) 882-8803 |
| No-Turn Bin | yes | Cylindrical, plastic, w/ air tubes | $99.95 | Gardener Equipment Co. P.O. Box 106 Juneau WI 53039, (800) 393-0333 |
| Rubbermaid Composter | no | Cubical, plastic, w/ harvest door | $99.99 | Cole Hardware 956 Cole S.F., (415) 753-2653; Goodman Lumber 445 Bayshore Blv. S.F., (415) 285-2800; Sloat Garden Centers 3427 Wawona S.F., (415) 566-4415 |
| Seattle Composter | yes/no | Plastic hoop w/ or w/o lid & floor | $30-90 | RecyCAL Supply Co. P.O. Box 377 Murrieta CA 92564, (800) 927-3873 |
| Soilsaver Classic | yes/no | Cubical, plastic, w/ harvest door, w/ or w/o floor | $79-99 | Goodman's 445 Bayshore Blv. S.F., 285-2800; Sunset Garden Sppl. 320 Alemany Blv. S.F., 648-4242; Urban Farmer 2833 Vicente S.F., 661-2204 |
| Worm-A-Way | yes | Plastic worm bin w/ aeration tubes | $85 | Flowerfield Ent. 10332 Shaver Rd. Kalamazoo MI 49002, (616) 327-0108 |
| Yardcycler | no | Plastic bin w/ side mixing slots | $89.95 | The Toro Co. 8111 Lyndale Av. S. Minneapolis MN 55420, (612) 831-0886 |
| Yahoo Worm Bin | yes | Wooden worm bins, salvaged wood | $30-50 | Yahoo Compost! 968 Valencia S.F. CA 94110, (415) 282-WORM |
| Yard Ball | yes | Spherical tumbler, with harvest door | $159 | DJK Enterprises 3874 Ranchero Rd. Cedar Fall IA 50613, (319) 988-3337 |

* Prices listed are subject to change

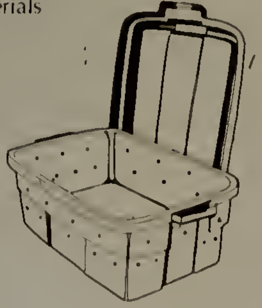
***** The Earth Machine is San Francisco's '93-94 Bargain Compost Bin—just $32.50 to City residents. For availability information, call the Rotline: 285-7585.***

# WORM BINS

- For fruit & vegetable trimmings
- For indoors or outdoors, very compact
- Most fun! (See *Composting Fruit & Vegetable Trimmings* brochure)
- Produces small amounts of excellent fertilizer

## 1-PERSON PLASTIC WORM BIN

- Very easy to build; tidy for indoor use
- Plastic bins keep compost moist—will require regular additions of dry bedding
- $6 – $20 for new materials



### MATERIALS

♦ (1) Plastic storage container with a tight-fitting lid—min. 10" tall, 12"x24" base

### TOOLS

Power drill with 1/4" bit or utility knife

### ASSEMBLY

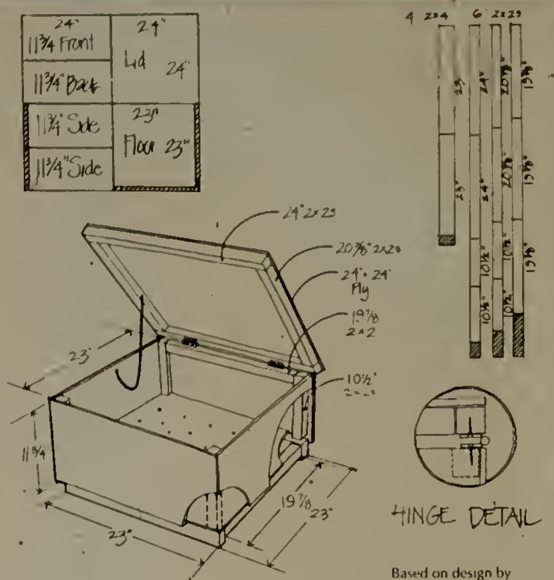
For indoor use, drill several holes for ventilation about half-way up the sides of the bin. For outdoor use, holes can be drilled in the bottom for ventilation and drainage. If you are using a utility knife to make holes, cut out triangles 1/4" or smaller.

## 2-PERSON WOODEN WORM BIN

- Basic carpentry skills needed for construction
- Doubles as a seat!
- Breathes well—will need occasional watering
- $20 – $30 for materials new

### MATERIALS

♦ (1) 4'x4' piece 1/2" exterior-grade plywood
♦ (3) 6' pieces 2x2" wood
♦ (1) 4' piece 2x4" wood
♦ 1 lb. 4-penny galvanized nails
♦ 16" light chain with (2) 1/2" wood screws
♦ (2) 2" hinges, with 3/4" wood screws
♦ Waterproof wood glue



Based on design by City Worms & Compost

### TOOLS

Power saw (use eye protection) or hand saw, hammer, measuring tape, pencil, square, drill with 1/4" and 3/32" bits, sandpaper

### ASSEMBLY

Glue all wood pieces before nailing.

**1. Base:** Nail the two 23" 2x4s and two 19-7/8" 2x2s to bottom of 23x23" plywood as drawn. Drill several 1/4" holes for drainage.

**2. Side, front & back walls:** Nail the four 2x2 uprights to the two side walls along the 11-3/4" edge, with one end of each 2x2 flush with the top edge of the walls. Nail a 19-7/8" 2x2 hinge support to the top edge of the back wall piece, leaving 1-1/2" on each side for 2x2 uprights. Assemble box by nailing the 1-1/4" overhang of the side walls to the 2x2s on the base as drawn. Then nail the front and back walls to the 2x2 uprights and to the 2x4s on the base as drawn. Be sure the hinge support is at the top of the bin.

**3. Lid:** Nail lid together as drawn. Attach to box with hinges, making sure to pre-drill screw holes into the 2x2s, and position hinges as in detail. Attach chain with 1/2" wood screws so lid can rest in an opened position.

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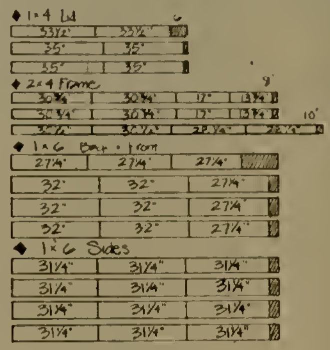
# URBAN ALL-WOOD BIN

- For fruit, vegetable & yard trimmings
- For "No-Fuss" or "Mixed" compost (see *Basic Composting* brochure)
- Has 2 front doors for easy harvesting and turning, a top that doubles as a sifter, & a full wire-mesh lining
- Produces small to large amounts of compost
- Carpentry skills needed for construction
- $100 – $120 for new materials

### MATERIALS

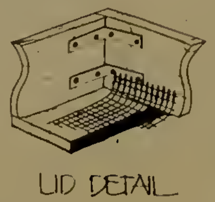
♦ (8) 8' 1x6 wood*
♦ (2) 8' 2x4 wood
♦ (1) 10' 2x4 wood
♦ (3) 6' 1x4 wood
♦ 15' 1/4" wire mesh hardware cloth
♦ (4) 5" drawer handles
♦ (8) 1-1/2" hooks & eyes
♦ (8) 4" corner brackets with 1/2" wood screws
♦ Waterproof wood glue
♦ (20±) 8 penny galvanized nails
♦ (125±) 6 penny galvanized nails—*or, screws and a power drill-driver can be used instead*
♦ (250±) 3/4" poultry wire staples



*Bin dimensions based on planed wood

### TOOLS

Power saw (use eye protection) or handsaw, screwdriver, hammer, measuring tape, pencil, square, drill with 1/16" bit, sandpaper

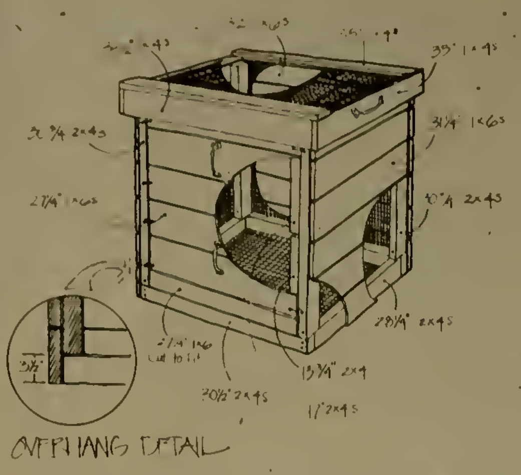


### ASSEMBLY

Glue all wood pieces before nailing.

**1.** Nail 2x4 bottom frame together with the larger nails. Be sure the finish dimension is 30-1/2x31-1/4".

**2.** Build sides by nailing bottom and top 31-1/4" 1x6s to the 2x4s (use smaller nails). Be sure bottom 1x6s hang down 3-1/2" below 2x4 uprights (see overhang detail). Fill in the remaining 1x6s equally spaced, with no gaps larger than 1/4".



**3.** Attach sides to base by nailing 3-1/2" overhang to base as drawn (with smaller nails). Toenail 2x4 uprights into bottom frame with larger nails.

**4.** Nail the six 32" 1x6s to back by first attaching the top and bottom pieces, then filling in the remaining four, spaced equally.

**5.** Before cutting pieces for the front doors, measure the actual opening at the front of the bin, and make sure to cut the 1x6s just 1/8-1/4" smaller than the opening. Build top door by nailing three 1x6s to the two 17-3/4" 2x4s with 1/4" between each board as shown. Build bottom door by first nailing on the top two 1x6s (1/4" apart), then measuring the remaining space, and cutting the last 1x6 lengthwise to fit.

**6.** Attach eyes to front 2x4 uprights, and hooks to front doors as drawn.

**7.** Build lid by pre-drilling and tacking together as drawn (using smaller nails), making sure the finished dimension is 35x35" and square. Then pre-drill and screw the corner brackets to the inside corners, and the top 1x4s into place. Cut a 33x36" piece of wire screen and staple it in as shown in detail drawing.

**8.** Cut remaining screen to fit—staple side, back and door pieces inside bin on 1x6s (not over 2x4s). Staple bottom piece onto the underside of bin.